

detector is subjected to error correction/decoding by the decoder 65 to obtain reception data from the signal line 66. The data packet is also input to the transmission power correction unit 123 which derives the transmission power control signal inserted in the data packet and inputs it to the traffic channel gain calculator 124. The traffic channel gain calculator 124 calculates a gain of the variable gain amplifier 68 to renew the gain, similar to the first embodiment.

With the base station and mobile terminals having the above structures and operating in the above manner, it becomes possible for a mobile terminal to perform transmission/reception of a data packet to/from the base station and reception of transmission power control by the base station, by using either the answer channel or traffic channel. Therefore, it is sufficient if only the mobile terminal has one set of a detector and a decoder, and so the circuit scale of the mobile terminal can be prevented from becoming large.

In the above embodiments, the invention has been applied to a mobile communication system of a reservation based access control scheme in which a base station transmits a transmission power control signal to each mobile terminal by using an answer channel. The invention is also applicable to a channel other than the answer channel if it is a common channel shared by mobile terminals. Namely, if a system uses a common channel shared by mobile terminals, the base station can perform transmission power control of a plurality of mobile terminals by transmitting transmission power control signals via the single common channel. Obviously, a channel dedicated to transmission power control may be provided to perform transmission power control of mobile terminals by transmitting transmission power control signals from the base station by using this dedicated channel.

While the present invention has been described above in conjunction with the preferred embodiments, one of ordinary skill in the art would be enabled by this disclosure to make various modifications to this embodiment and still be within the scope and spirit of the invention as defined in the appended claims.

What is claimed is:

1. A transmission power control method for a CDMA communication system for performing communication by CDMA between a base station and a plurality of mobile terminals, comprising the steps of:

transmitting over uplink traffic channels from said plurality of mobile terminals to said base station;

measuring, by said base station, a reception level of a signal transmitted from each of said plurality of mobile terminals, generating a transmission power control signal for each of said plurality of mobile terminals in accordance with the reception level, spreading said transmission power control signal for each of said

plurality of mobile terminals with a common spreader, and transmitting said transmission power control signal for each of said plurality of mobile terminals to each of said plurality of mobile terminals via a common channel shared by said plurality of mobile terminals; and receiving, by each of said plurality of mobile terminals, said transmission power control signal for the mobile terminal.

2. A method according to claim 1, wherein said spreader is used for spread spectrum.

3. A CDMA communication system for performing CDMA communication between a base station and a plurality of mobile terminals via a plurality of channels, wherein:

said plurality of channels include uplink traffic channels for transmitting a data packet from each mobile terminal to said base station, a reservation channel for transmitting a reservation packet representative of a traffic channel allocation request from each mobile terminal said base station, and a common answer channel shared by said plurality of mobile terminals for transmitting packet indicating an uplink traffic channel via which a data packet is transmitted from said base station to each mobile terminal; and

a common spreader that spreads a transmission power control signal of each of said uplink traffic channels and transmitting each said spread transmission power control signal via said common answer channel.

4. A system according to claim 3, wherein said spreader is used for spread spectrum.

5. A base station for communicating with a plurality of mobile terminals by CDMA, comprising:

a reception circuit for receiving a data packet transmitted from each of said plurality of mobile terminals, said plurality of mobile terminals transmitting over uplink traffic channels to said base station;

a unit for measuring the reception level of said received data packet;

a generator for generating a transmission power control signal for each of said plurality of mobile terminals in accordance with said measured reception level of said data packet;

a common spreader that spreads said transmission power control signal; and

a transmission circuit for transmitting said spread transmission power control signal to each of said plurality of mobile terminals via a common channel shared by said plurality of mobile terminals.

6. A base station according to claim 5, wherein said spreader is used for spread spectrum.

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